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**Descriptions of North American NOCTUIDAE, No. 2.**

BY AUG. R. GROTE.

**MARASMALUS, Grote.**

In this genus, which is related to *Eurhipia* and *Ripogenus*, the body parts are rather square and compact. Head concealed from above. Antennae short, shortly bipectinate from the base outwardly. Labial palpi a little dependant, projected straightly forwards, closely scaled. Caputal scales massed on each side of the vertex, towards antennal base. Thorax with an anterior dorsal tuft, and a double crest behind. Tegulae with raised scales. Abdomen recurved at tip, compact, hardly exceeding the hind wings; anal segment trigonately tufted; two pre-anal dorsal segmentary crests. Legs short; spurs feeble. Wings at rest folded on themselves, ample, elongated, entire. Forewings with straight costal edge; hind margin roundedly oblique, a little exerted at median nervules. A pliant very evident median fold. (The neurational features cannot be examined at present from paucity of specimens.)

The singular species has the habit of folding the wings when at rest in such a manner as to conceal their true size.

***Marasmalus ventilator*, Grote.**—♂.—Forewings pale dull olivaceous ochrey, washed with whitish, with narrow white lines and blackish and ferruginous blotches. Double basal arcuate white lines with blackish included space most deeply marked on costa. The wing is whitish before the faint dark arcuate median shade. Orbicular obsolete. Reniform, a white diffuse lunule with superposed included black dots connected by an arcuate line; above reniform a blackish costal shade which is apparently margined on either side by the t. p. line, composed of two widely separate narrow indistinct white lines. Beyond the reniform superiorly a bright ferruginous patch, and the costal region is ante-apically ferruginous with three white dots. Subterminal line faint, irregular, whitish, preceded on the fold by two blackish blotches. Terminal line black, fading inferiorly; fringes white, black dotted, blackish at apices and again medially. Hind wings pale blackish, with an irregular clear subterminal shade, a ferruginous patch at about the middle of the external margin and a blackish shade at anal angle; a black terminal interrupted line; fringes whitish. Beneath with obliterate markings, washed with whitish grey; primaries with the ante apical costal ferruginous shade; secondaries with black-

ish shade at internal angle with a discal mark and superposed costal blackish shade. Thorax beneath pale grey. Above the corporal tufts are deep ferruginous; anal hairs pale. Abdomen dark above; segments with pale edges. Above the veins of primaries tend to be picked out by pale scales. *Expanse*, 26 m. m. *Length of body*, 9 m. m.

*Habitat*.—New York; Andover, Mass.; “on fence with folded wings like Tettices (orthoptera)” — *Sanborn*.

### **PHYPROSOPUS, Grote.**

Forewings with straight costal margin, entire; external margin rounded, oblique; the internal angle rounded; the wing is elongate, rather narrow, full outwardly posteriorly about median nervules. A submedian fold discontinued exteriorly. Veins 4 and 5 approximate at base, 5 from extremity of median vein, 3 a little removed. Cell open; a small accessory closed cell, its upper margin not angulated; from its lower angulation vein 6 is thrown off straightly opposite 5 to external margin; 7 and 8 arise together from its outer end, 7 to external margin, 8 to apex, 9 out of 8 shortly to costa; 5, 6, 7 divaricate. Subcostal nervules aggregated; 10 out of upper margin of accessory cell, very near 9; 11 out of subcostal nervure opposite 2. Hind wings with costal edge a little sinuate or centrally depressed, rising to rounded apices. Median vein 3 branched; 5 independant, 3 and 4 together, 2 thrown off much within the middle, nervules long. Squamation close and dense. Head with a dependant frontal tuft. Labial palpi projected straightly forward beyond the head, second joint thickly scaled, terminal joint slender, continuous with second, finely scaled, acuminate. Legs finely scaled with slender spurs. Antennae ♂ rather long, shortly bi-serrate, the serratures diminishing gradually to tips. Abdomen a little longer than hind wings, linear.

**Phyprosopus callitrichoides, Grote.**—♂.—Fuliginous or purplish ferruginous, primaries with mottled pale scales, a purple reflection terminally. T. a. line pale, angulated on disc, obsolete superiorly; below the angulation very oblique, even, joining the internal margin near the base. Reniform obsolete indicated by superposed dark dots. T. p. line very distinct, pale, even, a little bent. This line runs inwardly obliquely from apex to internal margin at the middle. It is geminated below to vein 7, at which point the inner line runs narrowly back to costa above the reniform. This inner line is the true t. p. line, the outer the propinquitous subterminal: fringes short. Secondaries pale ochreous, terminally with indistinct darker shadings and a pale line perceptible on internal margin. Beneath immaculate, pale ochreous. *Expanse* 21 m. m.

*Habitat*.—New York; Texas.

This little species seems at first sight allied to *Calpe* or *Hemiceras*. In outline it has a spurious resemblance to *Coelodasys*. From my note book this is the *Doryodes acutalis* of the British Museum Coll. and Lists; not, of course, Guenee's species.

**PARGRAPTA**, *Hübner*.

The wings are ample, long and angulate. Primaries with the apical angle acute. Below the apex the external margin sweeps inwardly, but is outwardly produced and full at the extremities of median veinlets, sloping again inwardly to the retired internal angle. Forewings with 12 veins. Veins 4 and 5 spring together from the median nervure, 5 a little bent at base towards 4; vein 3 a little removed from 4; these three nervules appear propinquitous at base, as if arising together. Discal cell open. A small accessory cell, from the lower angulation of which vein 6 is thrown off on external margin. Veins 7 and 8 are thrown off together from the outer angulation of the accessory cell; vein 7 on to the external margin, subapically; vein 8 on to the costal margin just before the real apex of the wing. Vein 9 out of 8 on to the costal margin, a short furcation. Costal veins approximate. Hindwings with the external margin slightly acutely projected below the extremity of vein 7; the margin appears slightly interspaceally scalloped, retires below this first subapical projection, rising again at extremity of median veinlets. Nervules long; discal cell open. Veins 3 and 4 arise together. Vein 5 is independant, and arise a little nearer the base of the wing.

The body is tolerably stout; abdomen bluntly terminated, a little recurved in ♂, no longer than secondaries. Palpi very slender, divaricate closely scaled; 2d joint elongate, obliquely ascending; 3d joint longer than usual, attenuate, porrected at right angles with the second. Head small. Legs rather short and slender, closely scaled; hind tibiae with a pair of central spurs longer than those at the apices of the joint. Antennae short and simple.

The general resemblance of *P. decoralis* to the *Geometridae* is very great. At first we seem to have a species of *Selenia* or *Endropia* before us. The squamation is somewhat thin and powdery.

**Pargrapta decoralis**, *Hübner*, *Zutr.* 91, 92.—♂ ♀.—Grey with a lilac hue, distinctly shaded with ferruginous, of varying tint. Usually the male is brighter ferruginous and less distinctly marked. Basal half-line distinct on costa. T. a line arcuate, distinctly inwardly notched on disc. Outer half of the median space, margined inwardly by the median shade, ferruginous; here

the pale annulate reniform is perceivable. T. p. line distinct, even, dark, with a narrow succeeding pale shade, projected opposite the disc, slightly sinuate inferiorly. Subterminal line dentate, faint, accompanied opposite the disc by vague broad ferruginous or bright shades. Secondaries with all the lines continuous. Median line distinct; outer transverse line (corresponding with t. p. line) vague, with succeeding ferruginous shades. Discal black dot and streak. Terminal lines double on both wings, subcontinuous, lunulated; fringes cut with ferruginous. Beneath paler with all the markings distinctly reproduced. The more ferruginous diffusely shaded specimens are also more evidently washed with purplish outside of the t. p. line. It varies in tint; the ferruginous shadings become almost blackish in some female specimens. *Expanse* 25 to 26 m. m.

Not rare in New York State; Mass.; Penna.

This species seems to mimic *Endropia homuraria* G & R, more than any other of the Geometridae. The paler ferruginous purple washed specimens have somewhat the tints of *Choerodes*.

Dr. Fitch's *Hypena elegantalis* is a synonym. According to Mr. Riley, such names should obtain, because they are "better known," or "for reasons repeatedly given," or "for reasons which it would be too tedious to give," etc., etc. (See the Fourth Missouri Entomological Report.) In this same report "moral objections" are found to Dr. Le Conte's List of Coleoptera and our own of the moths, and it charged that "indignation" is the sentiment that such works arouse in the breast of the "true naturalist." Meaning, of course, the editor of the aforesaid Annual. Setting aside the verbiage with which our most modern author clothes his grievance, and coming to the point, we are complained of for using the authority for the combined terms we retain, instead of using in every case the original authority for the species. *Attacus cecropia*, Linn., is cited as a case in point on page 57. But the impression sought to be conveyed by Mr. Riley is a false one. The terms used for that species do not convey the same scientific idea. They are not, strictly speaking, identical. For, until 1865, it does not seem to have been proven that *Platysamia cecropia* afforded a distinct structural generic type. It seems to us an "injustice" to the original author of the combined generic and specific term, that he should not be quoted when his term is used. It is his property and, if it is used, he should be cited.

But Mr. C. V. Riley himself would not "carry out the law of priority too relentlessly." He "relents" when the species described in the reports as new, are found to be old discoveries. We are then asked to entirely ignore the original discoverer, to prefer Mr. C. V. Riley

to Zeller, Gueneé or LeConte. It requires a singular obtuseness to be "indignant" at a procedure which at least always recognizes the original description and a singular assurance to demand in the same breath a suppression of both description and describer.

### **MADOPA, Stephens.**

**Madopa interpuncta, Grote.**—♂ ♀.—Primaries dark shaded pearly grey, finely irrorate with black scales, with three nearly equidistant transverse even brownish lines preceded by pale coincident shades. The first line nearer the second, while the third is slightly arcuate, continued from apices to internal margin within the angle. Between the first and second lines a black dot on the disc, the orbicular. Beyond, but approximate to the second line, a larger black dot, the reniform. A series of minute interspaceal terminal dots. These are more continuous on the pale secondaries, which show a discal dot beneath. Legs darker than the body parts and abdomen above. *Expanse* 20 to 22 m. m.

*Habitat.*—Central Alabama.

Outline and ornamentation of the European *M. salicalis*, but smaller, a little darker and at once distinguished by the discal dots.

### **BLEPTINA, Guenée.**

Two species from the Atlantic district and the Gulf are contained in the collection. The antennae are simply pubescent, the palpi closely scaled, held free from the front, elevated and recurved at the tips, without sexual characters. The outline of the primaries is similar to *Renia*, but notably less exerted on external margin, while the costal edge is more depressed. The coloration is pale purplish-grey and the species in appearance resemble *Agrotis*, *Caradrina*, etc., while the ornamentation is but slightly modified from that of *Renia*.

**Bleptina caradrinalis, Guenée.**—♂ ♀.—Rather pale brownish grey, smoothly scaled, with a very light purplish shade, lines brownish; markings not very distinct except the subterminal line. Basal half line perceivable; t. a. line improminent, single, shortly waved. Median shade diffuse, continued, usually more prominent in the male, oblique, a little sinuate, touching the reniform. This latter, with the reduced orbicular, is usually black and contrasting in the female, whereas in the male it is deep yellowish, stained, with an included scale dot and ringed. T. p. line roundedly projected opposite the disc, finely dentate or waved, tending to mark nervular dots. Subterminal line geminate, even, prominent, with a stained pale central shade and accompanied by lateral brownish shadings which tend to become nervular on terminal space. The line is roundedly outwardly bent over the median nervules. Terminal interspaceal black dots; fringes pale. Secondaries paler towards the base, dark along external margin, with double dark shaded transverse lines, relieved by a paler external shade. Terminal black points and fringes as on primaries. Beneath the wings resemble secondaries above; discal dots dis-

tinged; primaries the darker. Palpi in both sexes pointed, recurved, rather pale or testaceous colored. *Expanse*, 25 to 30 m. m.

*Habitat*.—New York, Pennsylvania, Texas.

The female has the lines, except the subterminal, less distinct usually than the male and the ordinary spots often filled in with black. The specimens of *B. caradrinalis* from the Middle States measure 28 to 30 m. m.

***Bleptina inferior*, Grote.**—♂ ♀.—Darker and of a different hue compared with *B. caradrinalis*. The reniform is creamy pale, as is the orbicular, subobsoletely black ringed and shows an inferior black included dot. The markings of its congener are reproduced by this smaller species but less distinctly. The color of the primaries is of a more bluish and darker grey, and they are more uniformly colored, hardly darker shaded terminally. The secondaries are much darker, almost wholly blackish; the lines imperceptible or obsolete. Beneath both wings blackish, the subterminal line alone barely perceivable. *Expanse*, 24 to 26 m. m.

*Habitat*.—Alabama, Texas.

Three specimens of *B. caradrinalis* (Belfrage legit) from Texas are as small (25 m. m.) as *B. inferior*, but differ from *B. inferior* by their color, the paler secondaries lined above and the characteristic appearance of the ordinary spots in both sexes; in all of which they exactly agree with the larger Northern specimens of their species. I have fourteen specimens of *B. caradrinalis* and five of *B. inferior* before me, all of which latter have their antennal stem a little darker above compared with *B. caradrinalis*.

#### **HERMINIA, Treitschke.**

I refer to this genus nine species, specimens of which, from the Atlantic district are contained in the collection before me. These fall into two groups in a wide sense. The first six species have in common a more or less apparent crooking of the male antennal stem towards the middle, where it is tufted. The structure of the labial palpi is subject to slight specific modification, but, except in *H. morbidalis*, the palpi do not afford any strong secondary sexual character. In this species the palpi, with their straight 2d and reduced 3d article, are directed upwardly, though not as strongly recurved as usual in the male; while in the opposite sex they are projected forwards. This character reminds us of *Renia*. In the remaining species the second article is bent. In *H. laevigata* the male palpi seem a little more densely scaled. In this group the species have a more or less strongly expressed resemblance to certain European forms. The second group consists of two small species which have the male antennae more or

less lengthily pectinate, without nodosity, tuft or crooking. In *H. serraticornis*, the larger of the two species, the ♂ antennae are more shortly pectinated, the antennus is longer, while in *H. longilabris* the male antennal pectinations are lengthy and finer. The female of this latter species has simple antennae. The structure of the labial palpi differs in the two species. In both they are exaggeratedly long. In *H. serraticornis* ♂ (♀ ignot.) they are obliquely ascending, the second joint is straight, the third a little recurved. In *H. longilabris* ♂. The palpi are disproportionately elongated, projected forward, separating towards the tips; they are more lengthily compressedly scaled and have a flattened appearance. They resemble the palpi of the European *H. tentacularis*. Both of these smaller and lighter species look excessively like Geometridae, a resemblance which is heightened by their antennal structure, while the color is that of the first group. My knowledge of the European forms does not afford me strict analogues to these two latter American species.

From the excellent descriptions in the eighth volume of the *Species Général des Lépidoptères*, I am at once enabled to identify the three North American species described by M. Guenée. Beyond these I cannot find that our species have been intelligibly described. After having compared Mr. Walker's types of Lepidoptera in the British Museum Collection with the Lists, I find that little or no reliance can be placed on this author's original generic determinations. Where, therefore, his specific descriptions are not conclusive, it will be no injustice to omit any reference to them. We ought not to encumber our catalogues with a mass of apocryphal names, the existence of which tends to retard our knowledge of these insects by repressing our observations from a fear of synchronism.

***Herminia laevigata*, Grote.**—♂ ♀.—Rather pale carneous brown, variably, more or less distinctly shaded with rich deep brown on the primaries above, which, in fresh specimens, show a purplish gloss. Squamation pulverulent. Basal half line obvious. T. a. line nearly perpendicular, followed by a more or less extended diffuse dark olivaceous brown shade, which, though usually extending to the small blackish elongated orbicular dot, is sometimes wanting. Reniform large, lunate, usually filled in with black scales which then broadly contrast; sometimes open with a darker encircling line. Behind the reniform and approximate, as usual in this genus, to the transverse posterior line with which it coincides in shape, is the diffuse median shade, sometimes entirely obsolete, sometimes very obvious, again lost in a deep concolorous brown shade which then precedes the transverse posterior line. T. p. line of the usual shape, arcuately projected beyond the disc, where it sometimes



shows a slight superior notch. Subterminal line distinctly geminate, with a pale centre, nearly straight, a little irregular, continued; it is somewhat bent as in *Renia*, and is accompanied superiorly by a more or less evident blackish shade. A very distinct series of terminal interspaceal black marks. Secondaries fuscous, with faint discal lunule and double lines, the subterminal followed by a pale shade and angulated before anal angle; black terminal marks as on primaries, but more linear and continuous. Thorax colored like primaries. Beneath with double lines and a discal dot on both wings; less distinct on primaries, and where, in dark specimens, the markings are sometimes lost. Male antennae ciliate, thickening at base towards the middle, before which is a very minute tuft, not very sensibly nodose or crooked. ♂ fore tibiae with a dense dark testaceous fascicle of hairs, which can be extended. *Expanse*, 35 to 40 m. m.

*Habitat*.—Atlantic District (Pennsylvania, Virginia, West Virginia).

The largest, most variable and richest colored of our species, and one which reminds us a little of *Renia discoloralis*. The transverse lines are always true to their specific characters, but the presence or absence of the median and accessory deep brown shades makes a great difference in the general appearance of specimens. Sometimes the m. shade and brown shadings accompanying the ordinary lines are entirely obsolete.

***Herminia morbidalis*, Guenée.**—♂ ♀.—Whitish grey sparsely sprinkled with olivaceous scales. Lines olivaceous, distinct. T. a. line a little irregular, continued, sometimes nearly even when it is also more diffuse. Reniform diffuse and well sized, olivaceous. The median shade is not always apparent; in some specimens it may be noticed, appearing as a diffuse preceding shade approximate to the t. p. line, widening inferiorly. T. p. line roundedly projected beyond the disc where it is sometimes notched, of the usual shape. Subterminal line distinctive, being composed of a series of blackish V-shaped nervular marks edged outwardly by sagittate white shades, the points accumulate on the veins which, on the terminal space beyond, tend to be marked by pale scales. A series of minute nervular black points. Secondaries paler, with the peculiar subterminal line of the primaries less distinctly continued, and a fainter internal line and discal mark. Palpi with the elongated second article straight; in the male obliquely ascending, third joint recurved; in the female directed more straightly forwards. Male fore tibiae with a pale ochraceous tuft. In this species the wings are ample; the external margin of primaries full and rounded. *Expanse*, 30 to 35 m. m.

*Habitat*.—New York, Pennsylvania.

Early recognized by the sagittate subterminal line of the wings above.

***Herminia pedipilalis*, Guenée.**—♂ ♀.—Pale powdery olivaceous griseous. Lines narrow, even, dark olivaceous. T. a. line outwardly projected on subcostal nervure. Reniform spot faint, curved, linear. T. p. line somewhat acutely projected opposite the disc, otherwise of the usual appearance,

tending to be a little broader marked on costa. Subterminal obliquely rigid, linear, running from the extreme apices to internal margin within the angle, without accompanying paler shades, single. Usually this line is obliterate before the apices. Apical fringe touched with dark olivaceous; costal edge at apex with a small whitish mark. Secondaries pulverulent, rather darker than usual, with double transverse lines, the outer with external pale shade and angulated before anal angle; discal mark faint. Palpi recurved in both sexes, second joint bent, appearing a little shorter in the female. Male fore tibiae with a brush of blackish hairs not retractile as in the preceding species. *Expanse*, 28 to 32, m. m.

*Habitat*.—New York, Pennsylvania, Virginia.

Superficially this species resembles the European *H. barbalis*. The palpi are, however, differently held and shorter. The 2nd joint is straight in *H. morbidalis* and *H. barbalis*, where, in the female, the palpi are nearly straightly projected. The subterminal line is simple in *H. pedipalis*; the lines are finer and the secondaries darker than in the European *H. barbalis*.

***Herminia cruralis*, Guenée.**—♂ ♀.—Pale ochreous brownish or dark testaceous, with a light reflection. Wings proportionately short; external margin of primaries evenly rounded. All the lines dark, narrow, distinct. T. a. line perpendicular, even. T. p. line of the usual shape, nearly even, a little notched on the extra discal projection. Subterminal rigid, distinct, even, continued, running from costa before the apex to internal margin within the angle, succeeded by a very narrow, pale lined shade. Minute marginal linear points. Secondaries with double continuous lines. Beneath the wings are pale with powdery darker scales and double propinquitous powdery lines; black discal dots on both wings. Male fore tibiae with a fascicle of long scales, outwardly stained with blackish. Male antennae nodose. *Expanse*, 27 to 30 m. m.

*Habitat*.—Pennsylvania.

In color and appearance this species resembles the European *H. tarsi-plumalis*, but is shorter winged and brighter tinted. As remarked by M. Guenée, the course of the t. p. line is similar to that in the much slighter *H. grisealis*.

***Herminia marcidilinea*, Grote.**—♂ ♀.—A little larger and stouter than *H. cruralis*. Similarly colored and ornamented, but the squamation is more pulverulent. Lines hardly so distinct; t. a. line narrowly dentated or notched. Subterminal line running as in *H. cruralis*, but the line itself is obsolete, or nearly so, and an even, well marked, very pale shade replaces it, running across both wings. In its secondary sexual characters this species agrees with *H. cruralis*. *Expanse*, 31 to 33 m. m.

*Habitat*.—Pennsylvania, Alabama.

Closely allied to *H. cruralis*, but distinguishable from the different

appearance of the transverse lines of the wings above. The specimen from Alabama is a little darker colored, somewhat olivaceous. The squamation of the wings above in *H. marcidilinea* is powdery, with an admixture of pale scales.

***Herminia obscuripennis*, Grote.**—♂ ♀.—Both pair of wings above are obscure dark blackish brown, the primaries with a violaceous reflection. Course of the darker lines as in *H. cruralis*, but the t. p. line is more bent inferiorly. Antennae nodose; fore tibia with a retractile fascicle of testaceous scales. Body concolorous. *Expanse*, 25 to 30 m. m.

*Habitat*.—Central Alabama.

Three specimens, taken at Demopolis, at once differ from allied species by their obscure blackish color. The ♀ is smallest.

***Herminia ochreipennis*, Grote.**—♂ ♀.—Pale testaceous, shaded terminally with bright rusty ochraceous. The female has the wings entirely of the latter color. Ornamentation resembling that of *H. cruralis*. The t. a. line is waved and arcuated. T. p. line dentate and waved, much as in *H. marcidilinea*. Discal spot evident. Subterminal line rigid, followed by a pale linear shade, broadly marked. Secondaries pale, with powdery dark and ochrey scales. The two transverse lines unusually wide apart. Beneath with double propinquitous lines and distinct discal marks. Male antennae strongly nodose and crooked; male fore tibiae with exaggerated bright testaceous retractile tufts. *Expanse*, 28 to 33 m. m.

*Habitat*.—West Virginia, Pennsylvania.

While the pattern of ornamentation is that of the preceding species, *H. ochreipennis* differs by its more intense coloration, somewhat squarer primaries, the exaggerated male tibial tufts, while it is a little stouter and in its general appearance very distinctive.

♀♀ S. g. ***PHILOMETRA*, Grote.**

***Herminia serraticornis*, Grote.**—♂.—Wings ample; primaries with the costa a little depressed centrally, rising to the apices, below which the rounded external margin is a little depressed. Brownish ochreous; primaries with brown lines. T. a. line waved. Median shade very prominent, broad and diffuse, obscuring the discal mark. T. p. line a little irregular, waved, plainly notched opposite the disc on its exerted portion. Subterminal line prominent, shaded, twice inwardly angulated, touched with blackish before the apices. Terminal broken line barely noticeable. Secondaries powdered with blackish, nearly as dark as primaries, with double transverse shade lines. Beneath with double external propinquitous shaded lines and discal dots. Antennae rather long, without nodosity, shortly pectinate; pectinations gradually decreasing to the tips. Fore legs with a brush of blackish hair. Palpi

long, obliquely ascending, a little bent and recurved at tips. *Expanse*, 26 to 28 m. m.

*Habitat*.—Pennsylvania, Virginia.

The broad median shade is characteristic of the present and following species. Rubbed specimens easily lose the narrow ordinary lines, leaving the diffuse median shade and subterminal line alone evident.

***Herminia longilabris*, Grote.**—♂ ♀.—Slighter and more slender than *H. serraticornis*; coloration and ornamentation similar. Male antennae lengthily pectinate; in both sexes relatively short. Labial palpi very long, projected forwards, divaricate. Median lines narrow, shaped as in *H. serraticornis*, but more even. Median shade diffuse and prominent; subterminal line more linear, less angulated than in *H. serraticornis*. Beneath more yellowish, brighter stained, with a straighter and fainter external and a propinquitous bent and distinct interior line. Male fore tibiae not tufted. *Expanse*, 23 to 26 m. m.

*Habitat*.—Pennsylvania, Virginia.

Very easily distinguished by the above characters. When, by any accident, the palpi are broken off, the insect looks very much like a Geometer.

### **RENIA, Guenée.**

***Renia alutalis*, Grote.**—♀.—Brown. Primaries pale leather brown, evenly colored. T. a. line straight, single, linear, faint, in the ♂ probably more distinct. Reniform concolorous, with two black dots, the lower the larger. Median shade even, diffuse, apparent below reniform. T. p. line linear, irregular waved, marked on costa, else faint. Subterminal line determinate, consisting of a strongly marked preceding blackish shade, shaped as in allied species, and a faint following line. Terminal series of nervular dots distinct. Secondaries fuscous, paler within, crossed by two faint lines, corresponding to the t. p. and s. t. lines of the primaries as usual, with the even terminal border darkest and the space between the lines (corresponding with the subterminal space of fore wings) the palest. Palpi projected; thorax concolorous with primaries. Legs brownish with the tibiae blackish. Beneath, both wings resemble upper surface of secondaries. *Expanse* 32 mm.

*Habitat*.—Philadelphia. (Bunte).

This species has the outline of *R. breviostralis*, ♀, is perhaps a little larger and differently colored. I regret not to know the ♂, as in this genus both sexes should be observed, but I can have no doubt that it belongs here.

***Renia plenilinealis*, Grote.**—♀.—Ochreous brown shaded with blackish brown from the costa downwardly. Ornamentation distinct; lines blackish. T. a. line even, gently sinuate. Median shade diffuse, nearly straight, obscuring the reniform which is indicated by two superposed black dots sometimes fused into a black lunate mark. T. p. line fine, regularly lunulated, but

slightly projected beyond the cell. Subterminal line pale, preceded by an evident blackish coincident shade. A neat terminal series of interspaceal black marks. Secondaries blackish fuscous; the t. p. line continued, distinctly relieved by a pale shade inferiorly. A subterminal line preceded by a darker shade analogous to the s. t. line of primaries. Beneath paler, both wings similar, with continued transverse lines distinct, the subterminal preceded by a distinct blackish shade; discal black dots. *Expanse*, 25 m. m.

*Habitat*.—Philadelphia, (Bunte).

Outline of allied species, but differing in color and in the distinct ornamentation. Palpi projected, compressedly fringed, 2nd article elongated, while the 3rd is porrected at right angles. My specimens are all females; without a knowledge of the male, so that the antennal structure can be noted, I do not feel certain of its generic position.

The following is a list of the North American species of *Renia*:

*discoloralis* Guenée.

*Hypena fallacialis*, Walk.

*brevirostralis* Grote.

*alutalis* Grote.

*plenilinealis* Grote.

*larvalis* Grote.

*restrictalis* Grote.

*centralis* Grote.

2 2

*pastoralis* Grote.

*Belfragei* Grote.

In my previous paper, on page 27 of this volume, the observation relative to the appearance of the t. p. line in this genus, contained in the first four lines on that page, applies to *Renia pastoralis* and *R. Belfragei*. It is mistakenly printed before the description of *R. centralis*. The t. p. line is even, geminate and sinuate in the two last named species of *Renia*. In the rest it is less conspicuous, irregular, linear, dentate or waved, tending to be marked by dots on the veins. In appearance *R. larvalis*, *R. restrictalis* and *R. centralis* are blackish with indistinct markings; *R. restrictalis* the narrowest, most glossy and darkest.

#### **HYPENA, Treitschke.**

In the collection before me I separate fourteen species of *Hypena* from the Atlantic District. I have seen in the British Museum specimens referable to this genus and recorded under specific names that I here enumerate without having again identified the species. While Mr. Walker's *Hypena fallacialis* is a redescription of *Renia discoloralis* Guenée, his other species not recorded here are, for one cause or another, unentitled to acceptance in our Lists.

**Hypena citata**, Grote.—♀.—Our smallest species with a casual resemblance to the European *H. antiqualis*, but more nearly allied to the succeeding species. Apices of primaries determinate, external margin roundedly exerted at extremity of median nervules; fringes rather long, cut at extremity of the veins. Blackish, washed with whitish, indistinctly marked, somewhat speckled. At base downward along internal margin obliquely to t. p. line the forewings are pale, dull brownish; orbicular a black scale dot. T. p. line distinctive, nearly perpendicular, continued, outwardly a little irregularly waved, whitish with an inner olivaceous brownish marginal line. Reniform annulate with pale center touching the t. p. line at extremity of disc. A very indistinct minutely dentate arcuate subterminal line. A diffuse oblique whitish apical shade; costal antepical white marks. Terminal line black, broken on the veins, interspaceal, preceded by a coincident white line. Nervules tending to be marked by white scales. Hind wings blackish, concolorous, dark; fringes interrupted with a paler shade. Beneath both wings like secondaries above. Body parts pale beneath, dark above; labial palpi with the second thickly scaled joint elongated. *Expanse*, 19 m. m.

*Habitat*.—Alabama; August.

A similar inception of the t. p. line on costa may be traced in *H. evanidalis* and *H. humuli*, but the line is continuous and everywhere distinct in *H. citata*.

**Hypena evanidalis**, Robinson.—♂ ♀.—I think that the "lighter rusty-brown" specimens mentioned by Harris in his description of *H. humuli*, refer to this form which may, indeed, not be specifically distinct from the following, than which it seems a little smaller. Light dusty ruddy brownish with a more or less evident apical blackish shade. A dull blackish costal patch above the discal cell; on this are two separate pairs of superposed raised scale dots. An angulated pale line at extremity of cell. A subterminal series of small dots opposite terminal interspaceal black points. Hind wings rather pale with paler fringes. Labial palpi elongated. *Expanse*, 28 to 30 m. m.

*Habitat*.—Eastern and Middle States.

Resembles the European *Hypena rostralis*, but differs by the more even, less sinuate external margins of the wing.

**Hypena humuli**, Harris.—♂ ♀.—Darker and larger than the foregoing, I think Harris' "dusky or blackish brown" specimens are to be referred here. The fore wings are marbled and obscurely colored. The ornamentation is seen with difficulty, but it consists of raised scale dots and the angulated extra discal line as in *H. evanidalis*, from which it may not be distinct. Harris' figure in the "Insects Injurious to Vegetation" undoubtedly represents this form and not the preceding. On the whole this species rather resembles the European *H. obsitalis*, though narrower winged and darker, and, with *H. evanidalis*, quite unlike *H. rostralis* in the shape of the wings. *Expanse*, 30 m. m.

*Habitat*.—Throughout the Atlantic District; I have a specimen from Alabama.

***Hypena erectalis*, Guenée.**—♂ ♀.—Bright blackish brown with ashen shade and raised scales in lines and dots. Discal and submedian black longitudinal lines or dashes more or less evident. Extra discal angulate line of dark raised scales, followed by a pale shade, distinct and continued. Subterminal dentate line followed by pale coincident shade evident on the dark terminal ground color of the wing which is neatly limited superiorly by the oblique apical shade. A continued dark terminal line preceded by pale diffuse terminal points. Hind wings very dark fuscous. *Expanse*, 30 to 32 m. m.

*Habitat*.—Throughout the Atlantic District.

A well marked form of this species is:

a. ***Hypena subrufalis*.**

In both sexes a ferruginous shade fills in the lower half of the wing to the extra-discal or transverse posterior line and renders the dentate transverse anterior line apparent inferiorly. It tinges both lines and the terminal space, leaving the costo-apical region ashen as in the type. The discal and submedian dashes are obsolete. The superior portion of the primaries above the ferruginous shade is of a dull sooty black. Else it agrees well with type and occurs as commonly.

***Hypena scabra*, Fabricius, sp.**—♂ ♀.—Larger than *H. erectalis*, with very wide secondaries. Uniformly darker, more obscurely colored. Raised scales in dots and lines as in the preceding species. The primaries have an even somewhat olivaceous blackish appearance, with a slight ashen wash subterminally and apically. *Expanse*, 32 to 34 m. m.

*Habitat*.—Very common throughout the Atlantic District.

***Hypena baltimoralis*, Guenée.**—♂ ♀.—This is the American representative of the European *H. crassalis*. The primaries are rich brown from the base to the t. p. line leaving the internal margin usually pale. The brown color is produced downwardly near the t. p. line. The line is uneven, projected opposite the disc, thence running inwardly, instead of being continued perpendicularly for a space as in *H. crassalis*. Beneath the subterminal line is indicated by a single whitish dot below costa where in *H. crassalis* are usually two. *H. baltimoralis* varies much in depth of color, and while in some specimens the brown basal patch contrasts forcibly, in others the terminal space is nearly equally dark colored. The brown color varies in tint. These darker specimens seem to be analogous to the *var. terricollalis* of the European *H. crassalis*. *Expanse*, 32 to 34 m. m.

*Habitat*.—Canada, Eastern and Middle States; quite common.

The male has been described by Mr. Walker, under the name of *benignalis*.

***Hypena abalienalis*, Walker.**—♂ ♀.—Quite nearly resembles the dark *var.* of *H. baltimoralis*. The primaries are entirely blackish to the whitish geminate continued t. p. line. This is roundedly outwardly projected

over m. nervules and is more even than usual. Basal whitish line sometimes apparent. Subterminal line white, angulate, appearing interlaced with t. p. line and reminding us of *Cidaria atricolorata*. *Expanse*, 26 to 30 m. m.

*Habitat*.—Same localities with the preceding.

***Hypena bijugalis*, Walker.**—♂ ♀.—Primaries with a brown basal patch like *H. baltimoralis*, than which this is a somewhat smaller species. The t. p. line is distinctively shaped; it is nearly perpendicular, twice scalloped, projected most prominently and shortly over median nervules. Subterminal line an undulated series of distinct dots. Following the t. p. line the wing is palest shaded; in dark specimens with a violet wash. Varies in tint. *Expanse*, 27 to 31 m. m.

*Habitat*.—Eastern, Middle and Southern States.

***Hypena manalis*, Walker.**—♂ ♀.—Smaller than the preceding species. A median oblique olive brown patch extending downwardly from costa, margined inwardly by the even strongly outward oblique t. a. line, and outwardly by t. p. line, which is similar to t. a. line in appearance, but roundedly projected over m. nervules, thence inwardly oblique nearly joining t. a. line at lower angle of the median patch. Elsewhere the primaries show a purplish reflection. Subapical blotches or dash very obvious. S. t. line dotted. A minute raised scale dot on the cell, in place of orbicular, on the dark patch. *Expanse*, 23 to 25 m. m.

*Habitat*.—Canada, New York; altogether rarer than the preceding and our prettiest species.

***Hypena madefactalis*, Guenée.**—♂ ♀.—A broad winged species, colored like the foregoing, but less intensely and brightly. Primaries olivaceous brown to t. p. line which is nearly perpendicular, continued, a little waved, variable in evenness. The t. a. line perceptible, not pale like the t. p. line but darker shaded than basal space. Orbicular dot more or less evident. T. p. line followed by purplish washings. Subapical blotches variable in distinctness. Subterminal shades and lines inconspicuous. Beneath wing and body are ochrey tinted, former with obsolete markings. *Expanse*, 30 to 32 m. m.

*Habitat*.—New York, Pennsylvania, Virginia.

Guenée describes from a figure of Abbot's. I think this is the species intended, but there are slight discrepancies in the two descriptions.

***Hypena toreuta*, Grote.**—(=*internalis* || Robinson.)

This species is described in a previous paper. Mr. Robinson's descriptive term had been used by Guenée for another species. With the succeeding the external margin of primaries is unusually rounded.

***Hypena sordidula*, Grote.**—♂.—Size and color and form of *H. toreuta*. Sooty black, powdered with grey scales. The ordinary lines are faintly apparent, nearly perpendicular, brought into relief by pale powderings, waved or undulate. T. p. line usually marked by pale scales on costa. Several ante-



apical minute pale costal dots. Fringes interrupted with whitish on both wings, short. Secondaries deep blackish, with black discal dot apparent. Beneath paler, dusted with pale scales, without markings, except terminal lines as on upper surface and discal marks. *Expanse*, 30 m. m.

*Habitat*.—Pennsylvania.

Differs from *Hypena foreuta* at first sight by the absence of the pale patch on internal margin.

***Hypena profecta*, Grote.**—♂.—A large species with the costa of primaries depressed. Blackish brown with a very faint purplish lustre. Median space the darkest, defined by the darker shaded, nearly perpendicular, waved or uneven median lines faintly relieved by pale scales. Subterminal lines faint. Fringe on both wings blackish; secondaries concolorous, without marks. Beneath a little paler with shaded discal dot and diffuse common exterior line. Body concolorous; antennæ somewhat pale. *Expanse*, 35 m. m.

*Habitat*.—Pennsylvania; agrees with *H. deceptalis* in the shape of the wings, but an obscurely marked species with diffuse shaded lines.

***Hypena deceptalis*, Walker.**—♂ ♀.—Blackish brown. Wings wide; costa depressed; apices produced. Fore wings with two distinct continued even propinquitous sub-parallel pale or white median lines; the t. a. slightly angulated at costa and again less evidently at vein 1; the t. p. line a little bent on m. nervules opposite the cell; an indistinct subterminal series of darker shadings. Median space darker than the wing elsewhere, tolerably narrow; ordinary spots obsolete. Hind wings unicolorous, a little paler than primaries; beneath both wings paler than above. Body colored as wings; antennæ testaceous. *Expanse*, 32 to 38 m. m.

*Habitat*.—West Virginia, Canada (the small specimens) "No. 625."

#### DESIDERATA:

***Hypena edictalis*, Walker.**

"A large species with marbled primaries."

***Hypena damnosalis*, Walker.**

"Related to *H. edictalis*; the outer line is pale margined, regularly scalloped."

#### TORTRICODES, Guenée.

Of a single species inhabiting our Territory I have specimens before me which are apparently all males. These are characterized by an extraordinary semicircular deep cut in the external margin at about the middle and which divides the primary wing into two lobes. The parts are not widely separated and the edges are fringed, so that

we can imagine the margin to be abnormally drawn in. The neurulation is aberrant in consequence. The full secondaries have the cell incompletely closed. Vein 5 is removed from 3 and 4 at base and originates from the closure of the cell before the median fold. This neurulation agrees with that exhibited by what is here considered as a second species with undivided wings, but what is in all probability the normal female form of this remarkable genus. From all the species described by Guenée ours differ at once by the absence of costal tufts; but the neurulation agrees, on the whole, with Guenée's description, and I must consider our forms correctly referred here.

**Tortricodes bifidalis**, Grote.—♂.—Light, rather dull brown. On costa at base a trace of the basal half-line. T. a. line even, margining inwardly a diffuse deep brownish shade which extends over the median space anteriorly and fades towards the linear median shade line. Reniform small, pale centered, sometimes divided into two pale dots. T. p. line blackish, linear, like median shade in appearance, slightly projected below costa, inwardly curved at vein 1, a little irregular, less distinct towards internal margin. Subterminal line very distinct at costa where it is brought into relief by pale scales and forms a prominent exerted acute tooth on the upper lobe. The internal margin of the upper lobe shows a black dot at its middle and the extremity of the fissure is touched with black. A blackish apical shade. Secondaries fuscous with inconspicuous discal marks and double transverse lines relieved by paler shades; beneath the discal dot is black and distinct and the lines more evident; the inner black, denticulate. Head and appendages and thorax above concolorous with primaries. Abdomen like secondaries with a series of darker dorsal segmentary shades. *Expanse*, 25 m. m.

*Habitat*.—Atlantic District (New York to Texas).

I have taken this species at Hastings, N. Y., on June the 18th.

Neither the present nor the following show any costal hair tuft on the primaries like that characterizing the Brazilian and West Indian species described by M. Guenée. Our species differs from the description of *T. orneodalis* from Guadaloupe in many respects such as color, the presence of the distinct subterminal line and in all the details of the ornamentation and size.

What appears a second species exists in the collection and occurs in the same localities, but at first sight, by its color and style of ornamentation and size, this suggests an affinity with the preceding species. And as I see that Guenée records his 2nd group of the genus as wanting the characteristic cut of the fore wings, I can consider this species as not differing generically from *T. bifidalis*.

There is no vestige of a cut on the primaries, which have the out-

line and appearance of *Heterogramma*, as illustrated by Guenée. It corresponds with that genus in the absence of accessory cell on the primaries and the course of veins 6, 7 and 8, which are thrown off on the external margin from the same stalk. Veins 3, 4 and 5 are equidistant and approximate at base. The cell is closed and there is a cellular fold. But on the secondaries vein 5 is not "recurved and touching median nervure," since it issues from the discal cross-vein and is but little slighter. It is not continuous, however, with the discal fold, but is thrown off from the cross-vein nearer the median nervure. Veins 6 and 7 are furcate opposite to 3 and 4. The antennae are without peculiarity, slender. The palpi agree with those of *T. bifidalis*, being divaricate, bent upwardly and held free from the head. Structurally the difference between the two seem to be confined to the primary wings.

***Tortricodes indivisalis*, Grote.**—♀.—Light brown, a little variable in color, some specimens being darker. T. a. line perpendicular, followed by a diffuse dark broad shade as in *T. bifidalis*. Median shade broadly linear, waved, copying the t. p. line, which latter is narrower, inwardly angulated on the disc and again on submedian fold. Subterminal line very distinct, preceded by a distinct diffuse deep brown shade, followed by a narrow coinciding atomical pale line, copying in its course the t. p. line, deeply angulate opposite the cell; at its inception this angulation mimics that of this same line on the upper lobe in *T. bifidalis*. An apical shade. Apices acuminate and the external margin produced at extremity of median nervules. Secondaries pale testaceous blackish with an inner dark line and outer geminate linear pale and dark shade lines. Beneath with double minutely dentate distinct common lines, the inner somewhat undulate or irregular. Discal dots, as are the lines most distinct on secondaries. *Expanse*, 22 to 25 m. m.

*Habitat*.—New York, Alabama.

On a critical comparison *T. indivisalis* differs from *T. bifidalis* by the course of the t. p. line, which, in that species, after the costal angulation, descends perpendicularly to submedian interspace, whereas it is here angulated on the disc and mimics the subterminal. The general color is brighter, the diffuse shade which follows the t. a. line is not so dark, while the wing at base is paler than elsewhere and increases the resemblance of the two forms. In *T. bifidalis*, after the first very distinct outward oblique stroke of the subterminal, the line becomes nearly lost and its after-course, skirting the base of the incision, can hardly be determined, but it appears to descend weakly to internal margin. The hind wings and under-surface agree in the two forms, which I am inclined to consider as merely sexes of one species,

with the fore wings cleft in the male. And with four specimens of *T. bifidalis* before me and eight of *T. indivisalis*, I cannot but be sure that most, if not all, of my *T. bifidalis* are males, and of my *T. indivisalis*, females. The differences in the appearance of the two forms seem after all to be merely owing to the cleft in the wings of one; though the shade of color is not quite the same and the course of the t. p. line constantly differs. The dark colored maculate legs seem to be similar in appearance in both species while the armature seems alike; both forms have a single long spur at the extremity of the middle tibiae. I shall then not be disappointed that the two prove to be sexual forms of one species. Guenée had only males before him with cleft wings, and speaks doubtfully of the probable sexual peculiarities of the female. If *T. bifidalis* and *T. indivisalis* are ♂ and ♀, the sexual secondary characters will be confined to the primaries.

#### **CLANYMA**, *Guenée*.

Two species of this genus are described by Guenée from our Territory and specimens are contained in the collection before me. These are notable from exaggeration of the labial palpi, which, in the female, are thickly scaled and extended forwards and are longer than the head and thorax together; the 3rd article is held at right angles with the elongated second, small, distinct, subspatulate, porrect. In the male they are thrown backwards over the head and thorax, closely applied and furnished with a large hidden tuft of light-colored hair capable of expansion.

***Clanyma angulalis***, *Hübner*, sp.—♂ ♀.—Primaries brownish frosted with pale slightly purplish scales; colors bright. A narrow blackish half-line; t. a. line similar, inwardly oblique, outwardly waved. A minute orbicular dot. Median shade obsolete superiorly, forming an inwardly oblique very prominent deep brown shade streak below the disc to internal margin. Reniform well sized, deep brown, approximate inferiorly to the linear t. p. line, which latter resembles the t. a. line in appearance, a little irregular, projected opposite the disc. Subterminal line diffuse, followed by a distinct whitish shade, perpendicular, a little jagged or dentated. Costal region at apices with a brown shade below which, on external margin, is a bright yellowish shade patch. A narrow continued terminal line; the fringes are obsoletely spotted with brownish. Secondaries pale ochreous, darker shaded inferiorly, the t. p. line of the primaries continuous. A diffuse subterminal line followed by a whitish shade at the angle. Beneath with powdered dark scales and double lines on both wings; discal dot on secondaries evident. *Expanse*, 24 to 28 m. m.

*Habitat*.—Massachusetts to Alabama.

**Clanyma asopialis**, *Guenée*.—♂.—Deep purplish brown or blackish. T. a. line with a pale interior shade. Median shade diffuse, filling up the anterior half of the median space below m. nervure, narrowly obliquely continued to costa superiorly just within and touching the circular reniform spot which is divided by a pale streak. T. p. line a little diffusly shaded, especially inwardly inferiorly. Subterminal a little diffuse with a distinct pale shade, projected and angulated, touching the middle of external margin, dentated and geminate. A dark spot on the external margin. Hind wings blackish, very pale along costal region, with double diffuse transverse lines, the subterminal touched with whitish at anal angle, ♀ palpal tufts deep testaceous. The costa of primaries is more depressed, apices more acuminate than in *C. angulalis*, than which this is a smaller darker and more compactly built species: the ♀ abdomen is notably more reflexed. *Expanse*, 20 to 23 m. m.

*Habitat*.—New York to Alabama.

Guenée's description is based on defective material and is at best comparative. But this is undoubtedly his species, recognizable from the character assigned to the reniform spot.

I have now identified all of Guenée's descriptions of Deltoidae from our Territory, with the exception of *Rivula propinqualis*. The species referred by Guenée to *Helia*, will be described in a succeeding paper.